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SUBSTITUTE SPECIFICATION (37 CFR 1.125)

DEVICE FOR DISPENSING PLASTIC BAGS FROM ROLLS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0000.1] This Application claims the priority of Mexican Patent Application PA/U/2003/000166, filed on July 11, 2003, in the Mexican Patent Office, the disclosure of which is incorporated herein in its entirety by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention:

[0001] The present invention relates to a plastic bag dispenser used in self-service stores for storing and serially dispensing and severing plastic bags unwound from a continuous roll of flexible plastic bags connected in series and end-to-end and joined along perforated transverse tear lines, the bags being of the kind used to store, keep, hold and carry various products. To be more specific the invention relates to the structure of a plastic bag dispensing device for dispensing and separating adjacent plastic bags of the of the kind described.

2. Description of Related Art:

[0002] Currently, plastic bags which come on a roll for use by consumers, are widely used and/or found in many kinds of convenience stores, grocery stores, supermarkets, and self service stores to keep, carry and/or store various articles and

products, such as fruits and vegetables, meats, seafood, bread, products that are in boxes, tins, cans, bottles, as well as a myriad of other loose articles and products.

[0003] The plastic bags are manufactured in rolls with serrated transversal lines for detachment from the adjoining bag, and are often found hanging from metallic hooks supported on some kind of stand. This form of dispensing plastic bags on a roll is impractical and implies inconvenience for consumers and customers, given the need to use both hands in order to detach the bag.

[0004] Furthermore, the plastic bags dispensed from rolls, of the type described above, may easily be stolen by simply unhooking the roll(s) from the metallic hooks.

[0005] The rolls of plastic bags for which the device of this invention is designed, comprises a continuous roll of plastic bags in a line and rolled in various folds to be able to form, or not, the star seal; which consists of a fold at the middle, made twice across the length of the plastic film, without the aid of a cylindrical core. A transversal perforated line for detachment adjacently joins the serially-arranged plastic bags.

[0006] The roll is also characterized by the fact that each serrated transversal line incorporates a central slot.

[0007] There are some plastic bags dispensers of the kind which dispense plastic bags which come on a roll, such as those previously mentioned, and as was applied for on Mar. 13, 2002, in application Ser. No. PA/U/2002/000082; in the application it is intended to protect a dispenser of plastic bags on a roll, consisting of a box, which, at the bottom, incorporates at least one bolt acting as a spin axis for a roll of plastic bags,

incorporating a fixed bracket in each corner close to upper edge of its walls, same brackets which hold in place, a lid closed by applying pressure, covering the upper opening. The box incorporates at least one vertical slot on its front wall and one on either side; the (at least one) vertical slot incorporates a circular expansion at its upper extremity, through which the end of the bag of the roll of plastic bags passes. The box incorporates at least one vertical slot with at least one curved hook, consisting of a curved section with a central oblong rim. The rim passes the imaginary line of the vertical slot.

[0008] The roll of bags consists of a series of bags joined by means of a perforated transversal line with a central slot between each adjoining bag to which the central oblong rim is attached for the detachment of the bags.

[0009] However, apart from being a complex structure, such dispenser is extremely heavy, and if the outer bag on the roll becomes jammed, it is necessary to open the box in order adjust the roll.

[0010] The present invention, developed in light of the foregoing, resolves the existing inconveniences and problems, resulting in a more practical and efficient detachment of the plastic bags from the roll.

AIMS OF THE INVENTION

[0011] The principal aim of this invention is the provision of a device to dispense plastic bags from a roll, within establishments or businesses requiring the use of plastic bags to keep, hold, and carry products, allowing an easy availability of such bags.

[0012] Another aim of the invention is provision of a device for dispensing plastic bags from rolls that is sturdy and practical.

[0013] Another aim of the invention is the provision of a device for dispensing plastic bags from rolls that is visually attractive and economic to manufacture.

[0014] Another aim of the invention is the provision of a device to dispense plastic bags from rolls in a manner that the dispensed bags are easily accessible to costumers.

[0015] Yet another aim of the invention is the provision of a device to dispense plastic bags from rolls that is relatively easy to load.

[0016] All of these above qualities and aims shall become apparent upon a reading of a description of the present invention, when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE INVENTION

[0017] In general, according to this invention, a device for dispensing plastic bags from rolls of the type wherein a plurality of bags are serially connected and separated by transverse perforation lines having a central slot, comprises a box having four outer walls including front and rear walls, a base piece, and an inner base ramp sloping downwardly from the rear and towards the front, the walls and base piece forming at least one inside compartment where at least one roll of plastic bags is kept. The front edge of the base piece and lower edge of the front wall are juxtaposed, in spaced relation with one another, and cooperate to form, at least in part, a discharge opening that extends laterally

across of the bottom edge of the device for dispensing bags, one at a time, from the inside compartment. A vertical centrally disposed hook extends from the front edge of the base piece into the compartment, the hook having an opposite facing slope to that of the base ramp, in order to be hooked to the central slot provided along the perforated line between the adjoining bags of the roll, and detach the outer bag. The device also comprises a support stand or structure for supporting the box above the ground, the structure including a base plate, and an elongated support rod disposed vertically and having opposite ends connected, respectively, to the base plate and the base piece.

[0018] The forward and downwardly sloping ramp aids the approach of the roll of plastic bags towards and against the front wall, positions the next succeeding bag in the discharge opening, and facilitates the extraction and detachment of the bag by effect of the hooks.

[0019] In a preferred embodiment, the box incorporates at least one internal dividing wall, creating two compartments, each compartment being able to store one roll of plastic bags, successively discharge bags through a respective front discharge opening provided along the bottom front edge of the box and in communication with the interior compartment, each discharge opening associated with a respective roll and provided with a respective detachment hook to engage with successive of the slots in the continuous string of bags of the roll associated therewith.

[0020] The box may incorporate more than one dividing wall, thus creating more compartments with the same number of hooks for the detachment of the bags.

[0021] The compartments may be of equal or distinct sizes, in order to accommodate the rolls of bags whose dimensions correspond to their respective compartments.

[0022] In a preferred embodiment, the vertical tubular piece, acting as a support, is centrally fixed to a circular base plate. In another preferred embodiment, the supporting vertical tubular piece and the box are eccentrically aligned with one another, in a manner that the front wall of the box, where the discharge opening for extracting and detaching the bags is found, are aligned with one another in order to avoid the entire structure leaning toward and falling on, and injuring the person while trying to detach the other bag from the roll.

[0023] The problem of the instability of the structure of the device may also be resolved by fixing the base to the floor or incorporating a heavier base to avoid such movements.

[0024] The upper vertical end of the box may incorporate an opening and closable upper lid.

BRIEF DESCRIPTION OF THE DRAWINGS

[0025] FIG. 1 is a front elevation view, in perspective, of a device for dispensing plastic bags from rolls.

[0026] FIG. 2 is a plan view looking down at an alternate embodiment of a box for storing and dispensing plastic bags from rolls, including two compartments and

respective discharge openings, respectively, for storing and dispensing bags from separate rolls.

[0027] FIG. 3 shows a rear view of the device for dispensing plastic bags from rolls.

[0028] FIG. 4 is a front elevation perspective view of the box shown in FIG. 2 when storing two rolls of plastic bags in side-by-side relation and in respective compartments and an outer bag at the leading end of one roll being dispensed from the box and snagged by a hook for detachment of the bag from the roll of plastic bags.

[0029] For a clearer understanding of the invention, a detailed description shall be made of preferred embodiments thereof, as shown in the drawings, which are for illustrative purposes and not to be construed as limiting.

DETAILED DESCRIPTION OF THE INVENTION

[0030] The characteristic details of preferred embodiments of a dispensing device for dispensing plastic bags from rolls, are clearly demonstrated by the following description and the enclosed drawings. The reference numbers indicate the corresponding parts. Referring now to the drawings, FIG. 1 is a front elevation view of a dispensing device (100), which comprises a circular base piece or plate (12) for supporting the device on the ground, a dispenser box (1) for dispensing bags from rolls (15) (for example, see FIG. 4), and a vertical tubular piece (11), acting as a support, for supporting the dispenser box above the base piece (12) a distance sufficient to enable user access thereto and the roll (15) therein.

[0030.1] The dispenser box (1) comprises four walls disposed vertically including two lateral sidewalls (3 and 4), a back wall (5) and a front wall (6), and a base wall (14) disposed horizontally, the walls adjoined to form at least one internal compartment (7). The front of the dispenser box (1) includes a horizontal discharge opening or slot (8) and a hook (9). The discharge opening (8) is defined between the lower edge of the front wall (6) and the forward edge (10) of the base wall (14), extends laterally between the sidewalls (3 and 4), and forms an opening across the bottom of the box. The hook (9) extends upwardly from the center of the forward edge (10) of the base wall (14) and slopes generally rearwardly and into the inner compartment (7) of the box. The plastic bags are unwound from a continuous roll (15) of bags connected in series, end-to-end, and joined along perforated transverse tear lines (18), each tear line having a slot (17). The hook (9) is adapted to engage successive slots (17) with progressive tugging on the unwound roll section enabling the outermost bag to be detached from the roll of plastic bags (see FIG. 4).

[0030.2] A ramp (2) is disposed at the bottom of the compartment (7) for supporting the roll (15). The ramp (2) is juxtaposed above the base wall (14) and slopes from the back wall (5), downwardly, and towards the front wall (6), whereby the roll (15) will tend to roll downwardly and forwardly and be positioned against the front wall (6) and the free end of the roll of plastic bags positioned with the discharge opening (8) and detachment hook (9) associated therewith.

[0030.3] In the dispensing device (100), the compartment (7) is upwardly open (see FIGS. 1, 2, and 4) to permit rolls (15) of plastic bags to be dropped downwardly thereinto with the forward end of the roll to be dispensed positioned with the discharge opening (8)

at the front of the box (1). Further, the upwardly open compartment is adapted to be closed by a complementary lid (not shown), the lid being sized to fit about the opening and protectively enclose the roll 15 (FIG. 1), or two rolls (FIGS. 2 and 4) each in a respective compartment (7) or (7a and 7b), as will be described herein below.

[0030.4] The upper end portion of the vertical tubular piece is fixed to the base wall (14)

[0031] With reference to FIG. 2, the device for dispensing plastic bags from rolls is modified in a manner that the interior of the dispensing box (1) incorporates at least one internal dividing wall (13) thus creating two compartments (7a and 7b). In this embodiment, each compartment (7a and 7b) may accommodate a roll (15) of plastic bags, each compartment having an associated front discharge opening (8) and hook (9) arrangement with the hooks (9) extending from the front edge (10) of the base wall (14) and into the interior central part of each compartment (7a and 7b).

[0032] With reference to FIG. 3, the base wall (14) is below the forward sloping ramp (2), and connected to the upper end portion of the vertical tubular piece (11) in order to support the box in an upright position.

[0033] The forward sloping ramp (2) favors the approach of the roll of plastic bags towards the front wall (not shown), thus facilitating the extraction and detachment of the outer bag by the effect of the hooks (not shown). However, this may also be resolved, by omitting said the ramp from within the box and incorporating a flat bottom; and incorporating a diagonal slot, of a certain angle, within the vertical tubular piece (11),

in such a way that when putting the box together, the box leans forward and the bottom, or base thereof, is therefore at an angle, providing the same result.

[0034] FIG. 4 shows a perspective view of the dispenser box (1) of the dispensing device (100) (shown in FIG. 2) wherein two rolls (15) are disposed in respective compartments (7a and 7B) in side-by-side relation, the rolls separated by the dividing wall (13). The outermost bag from one roll extends through the front discharge opening or slot (8) of the associated compartment (7a), the hook (9) thereof is received in the slot (17) located midway of the transverse perforation line (18) separating adjoining plastic bags, and the outermost bag then pulled and detached from the roll of plastic bags. The outermost bag becomes detached from the adjoining bag of the roll (15) of plastic bags, by means of the perforated line (18), thus leaving the next bag protruding in order to be removed and carry out the same operation.

[0035] The invention has been sufficiently described in order that, a person with average knowledge of the field, could reproduce it and obtain the results mentioned in the invention herein. However, any technically skilled person who takes on the invention herein, would be able to undertake the modifications not detailed in the present application, moreover, if, for the application of such modifications within a determined structure or within the manufacturing process of same, the material covered in the following claims is required, then such structures should be covered within the reaches of the invention.